

Leukaemia Section

Short Communication

t(3;16)(q27;p11)

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Identity



G- banding - Courtesy Melanie Zenger and Claudia Haeflrich.

Clinics and pathology

Disease

Diffuse large cell lymphoma.

Epidemiology

Only one case to date, a 64 year old male patient.

Evolution

Complete remission was obtained.

Cytogenetics

Cytogenetics, morphological

Sole anomaly within the subclone

Genes involved and Proteins

BCL6

Location: 3q27

DNA / RNA

Spans on 25 kb; 11 exons.

Protein

Sequence-specific DNA binding transcriptional repressor.

IL21R (or IL21R-alpha)

Location: 16p11

DNA / RNA

Spans on 48 kb; 10 exons.

Protein

IL21R is, in fact, an heterodimer made of IL21R-alpha, and the common gamma chain (CD132); IL21Ra is the private receptor of IL21; IL21/IL21R, selectively expressed in lymphoid cells, activates the JAK/STAT transcription signaling pathway; IL21/IL21R plays a role in proliferation, differentiation of T cells, B cells, natural killers (NK) cells, and dendritic cells.; promotes and inhibit immune responses.

Results of the chromosomal anomaly

Hybrid gene

Description

The IL21R promoter region replaces the regulatory sequences of BCL6; the chimeric mRNA consists of the 2 non coding exons 1a/1b of IL21R and the coding exons of BCL6.

Fusion protein

Oncogenesis

Enhanced expression of BCL6.

References

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